

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1 (Canceled)

Claim 2 (Previously Presented): A ferroelectric capacitor comprising:

- a bottom electrode;
- a plurality of projection electrodes formed on the bottom electrode;
- a ferroelectric layer formed on the bottom electrode and the projection electrodes; and
- a top electrode formed on the ferroelectric layer,

wherein a thickness of the ferroelectric layer on the projection electrodes is less than a thickness of the ferroelectric layer on the bottom electrode, and

wherein spacing between central portions of each projection electrode has a range from 10% to 20% of a size of the ferroelectric capacitor.

Claim 3 (Previously Presented): A ferroelectric capacitor comprising:

- a bottom electrode;
- a plurality of projection electrodes formed on the bottom electrode;

a ferroelectric layer formed on the bottom electrode and the projection electrodes; and

a top electrode formed on the ferroelectric layer,

wherein a thickness of the ferroelectric layer on the projection electrodes is less than a thickness of the ferroelectric layer on the bottom electrode, and

wherein a size of each projection electrode has a range from 5% to 10% of a size of the ferroelectric capacitor.

Claim 4 (Withdrawn): The ferroelectric capacitor of claim 2, wherein the top electrode includes a plurality of second projection electrodes, each of the plurality of second projection electrodes facing respective ones of the plurality of projection electrodes.

Claim 5 (Withdrawn): The ferroelectric capacitor of claim 2, wherein the projection electrodes are made of bismuth or bismuth alloy.

Claim 6 (Withdrawn): The ferroelectric capacitor of claim 5, wherein the bottom electrode is made of a metal which includes bismuth.

Claim 7 (Currently Amended): A ferroelectric capacitor comprising:

a bottom electrode;

a plurality of projection electrodes formed on the bottom electrode;

a ferroelectric layer formed on the bottom electrode and the projection electrodes; and

a top electrode formed on the ferroelectric layer,

wherein the projection electrodes are arranged spaced apart from each other evenly, and

wherein a thickness of the ferroelectric layer on the projection electrodes is less than a thickness of the ferroelectric layer on the bottom electrode, so that cores of polarization inversion within the ferroelectric layer extend from the projection electrodes and ~~wherein the projection electrodes are arranged evenly spaced on the bottom electrode.~~

Claim 8 (Previously Presented): The ferroelectric capacitor of claim 2, wherein the bottom electrode and the projection electrodes are made of a same material.

Claims 9 – 14 (Canceled)

Claim 15 (Currently Amended): A ferroelectric capacitor comprising:

a first electrode;

a second electrode;

a plurality of third electrodes on the first electrode and spaced apart from each other evenly; and

a ferroelectric layer ~~which is~~ sandwiched between the first electrode and the second electrode, and on the third electrodes[[:]] ~~and a plurality of third electrodes formed evenly spaced between the first electrode and the second electrode, wherein the third electrodes generate polarization,~~

wherein a thickness of the ferroelectric layer on the third electrodes is less than a thickness of the ferroelectric layer on the second electrode, so that cores of polarization inversion within the ferroelectric layer extend from the third electrodes.

Claims 16-17 (Canceled)

Claim 18 (Currently Amended): The ferroelectric capacitor of claim ~~[[16]]~~ 15, wherein the first electrode and the third electrodes are made by a same material.

Claim 19 (Withdrawn-Currently Amended): The ferroelectric capacitor of claim ~~[[16]]~~ 15, further comprising additional ~~wherein the third electrodes are formed on~~ ~~[[both]]~~ the first and second electrodes.

Claim 20 (Withdrawn): The ferroelectric capacitor of claim 3, wherein the top electrode includes a plurality of second projection electrodes, each of the plurality of second projection electrodes facing respective ones of the plurality of projection electrodes.

Claim 21 (Withdrawn): The ferroelectric capacitor of claim 3, wherein the projection electrodes are made of bismuth or bismuth alloy.

Claim 22 (Withdrawn): The ferroelectric capacitor of claim 21, wherein the bottom electrode is made of a metal which includes bismuth.

Claim 23 (Previously Presented): The ferroelectric capacitor of claim 3, wherein the bottom electrode and the projection electrodes are made of a same material.

Claim 24 (Withdrawn): The ferroelectric capacitor of claim 7, wherein the top electrode includes a plurality of second projection electrodes, each of the plurality of second projection electrodes facing respective ones of the plurality of projection electrodes.

Claim 25 (Withdrawn): The ferroelectric capacitor of claim 7, wherein the projection electrodes are made of bismuth or bismuth alloy.

Claim 26 (Withdrawn): The ferroelectric capacitor of claim 25, wherein the bottom electrode is made of a metal which includes bismuth.

Claim 27 (Previously Presented): The ferroelectric capacitor of claim 7, wherein the bottom electrode and the projection electrodes are made of a same material.